EVALUATION OF THE SERVICE'S EFFORTS TO IMPLEMENT YEAR 2000 COMPLIANCE FOR EXTERNAL TRADING PARTNERS

Reference No. 091303   **Date: November 24, 1998**

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Executive Summary

In 1996, the Service established the Century Date Change (CDC) Project Office with an objective to ensure that all current and future IRS systems are Year 2000 (Y2k) compliant prior to January 1, 2000. Bringing the IRS systems into Y2k compliance also requires close coordination with many external organizations that receive data from or provide data to the Service. External organizations interfacing with the IRS include state and local governments, banks, other Federal agencies, and foreign governments. These external organizations are known as External Trading Partners (ETPs).

We performed our audit to evaluate the Service's efforts to implement Y2k compliance for externally traded data files with ETPs. The review was part of Internal Audit's coordinated reviews of the Service's Year 2000 efforts. We conducted the audit in an on-line environment in accordance with generally accepted government auditing standards. As the audit progressed, we immediately brought issues to management's attention. Management was responsive to our recommendations and implemented corrective actions. We will continue our on-line auditing of ETP issues as the Service continues to renovate its systems for the Year 2000.

Results

The CDC Project Office has made considerable progress to complete an inventory of external data exchanges and to communicate the Service's Y2k format changes with ETPs. Ensuring Y2k compliance with the Service's ETPs has required extensive coordination and effort by several organizations and Service functions. As a result, the CDC Project Office has encountered delays in completing several ETP activities.

Management's continued efforts are needed to ensure that IRS systems meet Y2k compliant standards and that discrepancies in the inventory of externally exchanged data files and data exchanges are corrected. Additional details on these two critical issues are presented below. During our review, we also recommended that the CDC Project Office downgrade the ETP activity status on management information reports from green to yellow to more accurately reflect the current state of ETP activities. Management subsequently changed the project status and no further corrective action is warranted for this recommendation.

Issues that management is in the process of correcting and should continue to emphasize to minimize risks with the Y2k conversion effort.

Source Code for Components Supporting External Exchanges of Data Files Did Not Always Meet Year 2000 Standards

▪ As of August 5, 1998, the Service reported 356 externally traded data files. Our analysis of source code for 47 components supporting 72 of the 356 external exchanges showed that 51 percent did not meet Y2k standards and guidelines. Recently, the Service contracted to have an outside vendor inspect all IRS tax processing and administrative system code to identify Y2k non-compliant components. (See Pages 5-7)

Discrepancies in the Service's Inventory of Externally Exchanged Data Files Impact Effective Communication of the Date Standard

▪ Recognizing the importance to effectively communicate the Service's date standard format, the CDC Project Office developed a communications package and established a three-step process for working with ETPs. However, discrepancies in the Service's inventory of externally exchanged data files impact effective communication of the date standard. For example, we identified an additional 132 data files that appeared to be externally exchanged, but were not included in the Service's inventory. Also, we determined that some external exchanges with mass contacts were not included in the project office's certification process. On June 29, 1998, the CDC Project Office requested that Chiefs, Directors, and Regional Commissioners certify that all files that their offices maintain have been linked to a data exchange and that the data exchange is correct. Management also agreed to validate the exchanges and complete the mass contact certification by October 1, 1998. (See pages 7-8)

Management's complete responses are shown as Attachments II-VI.

Introduction

We performed this review to evaluate the Service's efforts to inventory, establish milestones, and establish an outreach program to ETPs.

The Commissioner established a 12 step *Servicewide Combined Management Program* for the Service's Century Date Change and the 1999 Filing Season efforts. External Trading Partners (ETP) is one of the seven steps classified by the Commissioner as a specific Year 2000 (Y2k) Program Management area. The Service's Y2k efforts are one of four critical Information Systems projects monitored monthly by the Commissioner's Year 2000 Executive Steering Committee. We initiated this review at the Commissioner's request, based on the Service's need to inventory, establish milestones and establish an outreach program to ETPs.

We conducted the review between March and August 1998 as part of Internal Audit's coordinated reviews of the Service's Year 2000 efforts.

Objective and Scope

Our overall objective for this review was to evaluate the Service's efforts to implement Y2k compliance for external data exchanges. Our audit evaluated programs scheduled by the Service for completion in phases one through three of the Y2k conversion process.

To accomplish this objective, we focused our tests in the following areas:

- Ensuring that a system is in place and operating effectively to accurately report the project's progress to executive management.

- Determining whether all trading partners have been accurately identified.

- Assessing the completeness and accuracy of inventory of trading partners, data exchanges, and exchanged data files.

- Assessing converted Y2k compliant programs for compliance with Y2k standards.

- Determining if mass contacts are being identified and notified of the Y2k standards and the effective implementation date.

We performed our review at or obtained information from the following sites in accordance with generally accepted government auditing standards:

- The Century Date Change (CDC) Project Office in New Carrolton, Maryland.

- Martinsburg and Detroit Computing Centers in Martinsburg, West Virginia and Detroit, Michigan respectively.

- All 10 service centers.

- All district offices located in the Southeast Region.

During the review, we issued four Internal Audit Memorandums (IAMs) to advise management on issues of concern. Management's responses to the IAMs are included as Attachments II through V to this report. Attachment VI contains the response to our draft report.

The detailed scope and objectives of our review are included as Attachment I.

Background

The IRS shares data with many external organizations. Close coordination is critical to ensure that these external organizations have implemented the new Y2k compliant date formats.

Year 2000 is a critical problem facing the global data processing community. By January 1, 2000, numerous calculations and other critical computer operations using, manipulating or updating date fields will not work correctly with the two-digit representation of the year in most computer applications.

The century date change problem is a major challenge to the Service in converting data it processes internally. Additionally, the IRS interfaces with many external organizations, including state and local governments,

banks, other Federal agencies, and foreign governments. These external organizations that receive data from or provide data to the Service are known as ETPs. Close coordination with the ETPs is essential to assure that the new Y2k compliant date formats have been implemented and the date of the changes communicated.

The Service's vision for addressing ETP issues is to ensure that all ETPs are identified, contacted, and informed of the Service's Y2k format changes and the effective date of the changes. Additionally, all files transmitted to and from ETPs will be inventoried, as well as the systems the files run on. The points of contact at both the Service and ETP level will also be identified.

The CDC Project Office has responsibility for monitoring the progress of the Service's Y2k conversion efforts for externally traded files.

The CDC Project Office is responsible for monitoring the progress of the Service's Y2k conversion efforts for externally traded files and for supporting functional areas to ensure that the ETPs understand the CDC conversion process. The CDC Project Office uses the Trading Partner Data Exchange (TPDX) on the Information Network and Operations Management System (INOMS) to facilitate the tracking and reporting of ETP activities.

To facilitate management of the conversion, the implementation process is divided into five phases based on the semi-annual IRS production cycles. The completion dates for the five phases range from January 1997 through January 1999. The applications in each phase were based on priority. For example, Tier I applications (mainframe-resident application programs) had the earliest conversion dates.

Other key dates related to the conversion of externally traded data files include the following:

- December 1997 - all ETP components were to be tracked on the INOMS.

- April 1998 - all certifications with ETPs were to be completed.

- August 1998 - all programs were to be tested.

- January 1999 - all programs were to be compliant.

Results

The Project Office has made considerable progress in identifying ETPs and communicating the Service's Y2k standards to ETPs. Their efforts include surveying all Information Systems and Field and Customer organizations for ETPs and external exchanges, developing a system to collect and report inventory information, enhancing INOMS functionality to track ETP progress, communicating format changes and effective dates to key ETPs, and beginning to communicate Y2k standards to other external organizations and the public.

While progress has been made, Service management needs to continue to address certain issues to minimize the risk that applications related to externally traded files will not be Y2k compliant when the Year 2000 arrives.

During our review of the Service's activities regarding ETPs, we reported the following concerns to management:

- Computer source code for components that read or write to externally traded files did not always meet established Service standards and guidelines for Year 2000 compliance.

- Discrepancies in the Service's inventory of externally exchanged data files impact effective communication of the date standard.

- Delays were encountered in meeting key target dates, such as the certification process of notifying and obtaining ETP agreements to comply with the standards, and matching data exchanges with data files.

Project management has taken or is planning corrective actions on these concerns. Management must also continue to follow up on the certification process to

ensure trading partners are notified of the date standard
and correct any components identified as not Y2k
compliant. Additionally, efforts currently in place to
monitor the completeness of the inventory should
continue.

In response to a prior Internal Audit Report (<u>Review of
the Service's Year 2000 Conversion and Testing for
Phase III</u>, Report #083605, dated 6/24/98), the Service
recently contracted with Northrop Grumman Technical
Services, Inc., an outside contractor, to inspect all IRS
tax processing and administrative system code to
identify Y2k non-compliant components. The Project
Office will be relying on the services of this contractor
to help assure that the source code components for the
externally traded files are actually Y2k compliant. This
will address the concerns we identified and reported
during our review regarding the source code components
not being Y2k compliant.

Source code for components supporting external exchanges of data files did not always meet Y2k standards.

A computer source code component is software code
that may exist in the form of a software program, part of
a software program, or a subroutine. Guidelines
required year fields to be expanded to four positions,
prohibited the use of non-compliant subroutines and
required the use of numeric formats for the date field.

*Based on our review of 47
components, designated as
being Y2k compliant, 24
(51%) did not meet Y2k
standards.*

As of August 5, 1998, the Service reported 356
externally traded data files. We analyzed code for 47
components linked to 72 of the 356 externally traded
data files. These components were Y2k compliant on
INOMS as of April 3, 1998 and remained on INOMS in
Phase 2 and 3 as of May 26, 1998. We found that
despite the CDC Project Office's efforts to monitor the
progress of conversion activity for Phase 2 and 3
components, many components designated as Y2k
compliant did not meet Y2k standards. Our analysis
showed that 24 components (51 percent) linked to 41

data files (57 percent) did not meet Y2k standards and guidelines. For example:

- Nineteen components used improper formats.

- Fifteen components contained programming errors (for example, the use of routines that compared two-digit to four-digit fields or contained date fields with two digits for the year).

- Five components contained temporary fixes that will not work beyond 1999 (for example, hard coded century date-related fields).

- Three components contained non-compliant subroutines.

- One component contained a bridge.

By not meeting the standards, there is the probability that the programs will not run correctly in the Year 2000. We will not know definitively until they are tested.

The CDC Project Office established milestones for accomplishing the Y2k conversion of software programs within the Service. The milestones are critical and the deadline is non-negotiable; therefore, slippage of the schedule could risk the completion of the conversion process by the year 2000. Programming errors cause re-work that could delay the already aggressive implementation schedule. Every effort should be made to eliminate the amount of re-work.

While discussing results with the CDC Project Office management, we determined that the Service obtained the services of an outside contractor (Northrop Grumman Technical Services, Inc.) to analyze code for compliance with year 2000 standards for 100 percent of all phase components. This includes components linked to data files exchanged with ETPs. (Note: This was corrective action taken by management in response to issues raised by Internal Audit in a report on Phase III components (#083605)).

The Service plans to rely on an outside contractor to quality review code conversion.

Ultimately, the Service plans to rely on Grumman's final assessment of the Service's progress on the code conversion. The results of our source code review may provide the Service the opportunity to evaluate and correct the non-compliant issues we identified prior to Grumman's inspection of the code.

Discrepancies in the Service's inventory of externally exchanged data files impact effective communication of the date standard.

Recognizing the importance to effectively communicate the Service's date standard format, the CDC Project Office developed a communications package and established a three-step process for working with ETPs. The first step was to inventory all ETPs and data exchanges. Next, the Service would obtain the ETPs' certification that they had been informed of the standard and would be ready by the conversion date to exchange files using the IRS's date standard. Finally, the Service would provide ongoing communication with the ETPs to resolve any problems.

While significant progress has been made to inventory ETPs, we identified discrepancies that could affect the certification process which is designed to ensure that all ETPs are aware of the date standard.

The CDC Project Office has made significant progress to inventory ETPs and data exchanges. Their efforts have included an exhaustive survey of IRS organizations, development of a system to collect and report inventoried ETPs and data exchanges, and enhanced INOMS functionality to track ETP progress. These efforts have resulted in the identification of over 360 ETPs and 350 exchanged files.

Our review showed that 132 externally exchanged data files were not inventoried and 13 of 95 data files reviewed, involving 36 trading partners, were linked to the wrong data exchange. In addition, 7 of 19 mass contact data exchanges were not included in the mass contact certification process.

However, our interviews, on-site visits to service centers, districts and a computing center, and other contacts identified missing data files and several inaccuracies in the linking of the data files to the data exchanges and ETPs. Specifically, we identified 132 files that appeared to be externally exchanged, but were not included in the Service's inventory. Most of these files were identified by reviewing documentation maintained by the scheduling unit in the service centers and computing center. In a separate review of 95 exchanged data files and related documents, we determined that 13 (14 percent) involving 36 trading partners were linked to the wrong data exchange and seven (7 percent) were linked to the wrong trading partner.

These discrepancies in the inventory affect the accuracy and completeness of the certification process, which was designed to ensure that the ETPs were informed of the IRS date standard and would be ready by the conversion date to exchange files. Our review of certifications for the mass contacts (i.e., filers of information returns on magnetic media and electronic transmitters of individual and business returns) identified that the CDC Project Office had only included 12 (63 percent) of the actual 19 mass contact data exchanges. The mass contacts had been notified by the responsible functions, but were not included in the certification process.

The CDC Project Office has taken additional actions to verify the inventory of exchanged data files and accuracy of data exchanges.

We informed the CDC Project Office of our concerns with missing files and the accuracy of data exchanges. We also recommended that management conduct another certification for mass contacts. On June 29, 1998, the CDC Project Office requested that Chiefs, Directors, and Regional Commissioners certify that all files that their offices maintain have been linked to a data exchange and that the data exchange is correct. The CDC Project Office also agreed to validate the mass contact exchanges and complete the mass contact certification by October 1, 1998.

Delays were encountered in meeting key target dates, such as the issuance of certifications and matching data exchanges with data files.

Our review identified delays in completing certifications with ETPs and matching data file inventory with data exchanges. As a result, management downgraded the status of conversion activity to be "at risk."

The CDC Project Office uses the following indicators to reflect the variance between the planned and actual state of the conversion activity: (1) green status – considered in good standing, (2) yellow status – considered at risk, and (3) red status – considered at great risk. The assessments are used to inform the Combined Management Program for Century Date Change and 1999 Filing Season Executive Steering Committee of the status of the progress for a particular area of the implementation plan.

At the May 12,1998 Executive Steering Committee meeting, the overall assessment for ETP activities was reported in a green status although several delays had occurred or were anticipated. Specifically, there were significant delays in:

- Matching the data file inventory with data exchanges; and

- Completing of certifications with ETPs.

The Project Office was scheduled to complete the matching of data files to data exchanges by March 31, 1998. Delays in the matching of the data file inventory to data exchanges is significant since it impacts the timely distribution of certification forms to ETPs communicating the Y2k date format standard.

Also, the completion of certification forms was scheduled for April 30, 1998. The certification forms are very important since they provide the Service assurance that the ETPs are informed of the standards and that the ETPs will be ready to accept or provide externally traded files to the IRS using the CDC standard.

We recommended that management downgrade the overall assessment and conversion progress categories to a yellow status to more accurately reflect the current state of ETP activities. Management agreed and

responded by downgrading the assessment status to
yellow.

Significant progress has been made by the Project Office
to link data files to data exchanges and complete the
certification process. As of September 9, 1998, the
Project Office reported that virtually all of the 162 data
exchanges have been linked to data files and over 50
percent of the certification forms have been provided to
ETPs.

Conclusion

*Project management should
continue to closely monitor
efforts regarding the
certification process,
converting components, and
maintaining the inventory.*

Identifying all externally exchanged data files and
updating them to ensure they are Y2k compliant is very
important to the Service. The risk to the Service is high
if external trading partners are not identified and they or
the Service has not updated the files according to Year
2000 standards. Service management needs to continue
its efforts to ensure that external trading partners' data
exchanges are Y2k compliant by following up on the
certification process, correcting any components
identified as not Y2k compliant, and continuing to
monitor the completeness of the inventory.

During our review, we reported several project control
concerns, including those risks mentioned above, to
project management, which they corrected or are
planning to correct.

Lynn Wofchuck

Lynn Wofchuck
Audit Manager

ATTACHMENT I

Detailed Scope and Objectives

Our overall objective for this review was to evaluate the Service's efforts to implement Y2k compliance for external data exchanges. Our audit evaluated programs scheduled by the Service for completion in phases one through three of the Y2k conversion process. To accomplish this objective we performed the following audit tests.

I. To ensure that the project office established measures to effectively monitor implementation of Y2k compliance for external data exchanges, we:

   A. Determined whether an action plan with targeted completion dates and responsible officials was developed to identify ETP activities.

   B. On a monthly basis, reviewed the reported status of completion for major ETP activities to ensure that it was accurately reflected and reported to the CDC Project Manager and Executive Steering Committee.

II. To evaluate the Service's efforts to develop the Data Exchange Information Management System (DEIMS) database and the TPDX on INOMS to provide an IRS-wide inventory of all ETPs, data exchanges, and agreements, we:

   A. Reviewed the Software Requirements Specification to determine if the product was intended to meet the objective of the database and be completed in sufficient time to facilitate transition of programs to a Y2k compliant status.

   B. Obtained the Statement of Work (SOW) for the development of the database to determine if the contractor met the contract requirements.

   C. Determined whether the project office took appropriate measures to ensure that the delivered system meets stated requirements.

   D. Assessed whether the database contained the necessary fields to adequately track ETPs, data exchanges, and agreements by determining if the database contained:

      1. Specific listings of each functional area's external data exchanges.

      2. All relevant information about the data exchange, including the ETP name, the Service and ETP contact points, and whether the data is tax or non-tax related.

      3. The data exchange format, frequency, and exchange site.

      4. An indicator to establish whether the exchange has been made Y2k compliant and tested.

    E. Determined whether the fields established on the TPDX and populated with information from the DEIMS database are sufficient to adequately track ETPs, data exchanges, and agreements for exchanged data files.

III. To assess the completeness and accuracy of the Service's inventory of ETPs, data exchanges, agreements, and exchanged data files, we:

    A. Evaluated the effectiveness of the project office's attempt to inventory all ETPs, data exchanges, and exchanged data files identified by Information Systems (IS) and non-IS organizations by:

        1. Reviewing the memorandum requesting the information and determining whether it clearly described the data to be included in the responses from the IS and non-IS organizations and whether the requested information was sufficient to establish an inventory.

        2. Sampling 338 responses from the IS and non-IS organizations to the memorandum (See III.A.1) and determining if the identified ETP, data exchange, and data file was properly included in the DEIMS database and the TPDX on INOMS.

        3. Conducting interviews and surveys of 64 Y2k Coordinators at the Headquarters and Regional offices, including all service centers and computing centers, regarding the process used to identify ETPs, data exchanges, and externally exchanged files to ensure that they had a clearly defined and structured approach to facilitate a complete inventory.

        4. Performing on-site visits at six service centers, the Martinsburg Computing Center, and Georgia District office; and contacting the remaining service centers and Southeast Region district offices to identify any ETPs, data exchanges, or externally exchanged files that were not inventoried for the appropriate IS or non-IS organization.

    B. Evaluated the effectiveness of the project office's activities to identify and evaluate key ETPs by:

        1. Discussing with the project office the process used to identify key ETPs to determine if the approach was based on sound measures, such as core business functions.

        2. Reviewing the SOW for the selected contractor to determine if the deliverables provide a value added service.

        3. Reviewing the deliverables to determine if requirements of the contract were met.

    C. Assessed the accuracy of the Service's information on inventoried ETPs, data exchanges, agreements, and externally exchanged files by:

1. Reviewing access privileges for DEIMS and TPDX, including the process for transferring ETP and data exchange information to determine if the integrity of the data is maintained.

2. Selecting a sample of ETPs from DEIMS and TPDX and determining whether the fields are populated to show:

   a. The name of the ETP, type, office and employee.

   b. The data exchange contains appropriate information such as a description, availability indicator, retired date, business owner contact, and tax data indicator.

3. Selecting a sample of externally exchanged data files from the Application Program Registry (APR) and determining whether:

   a. The linking between the component, data file, data exchange, ETP and agreement was accurate by:

      1) Obtaining and reviewing documentation on data exchange, ETP and agreement for each data file.

      2) Comparing the information obtained to the data contained on the appropriate tables/systems, for example, a data file on the APR is linked to the appropriate ETP in the ETP table.

   b. The Input/Output Indicator, File Description and External Use Indicator for the Data File Specifications and the ETP Contacted field for the Component Y2k Milestone Achievement have been updated on the APR.

   c. The status of the Y2k conversion has been updated accurately for each data file on the APR containing data exchanged with ETPs by:

      1) Determining whether the INOMS field has been populated for the three conversion milestones for externally traded files.

      2) Obtaining and reviewing documentation such as core record layouts, file specifications, run descriptions, source codes, and production data sets for all input, interim and output files for each Y2k compliant exchanged data file on INOMS to ensure programs are compliant by allowing a four character year field.

      3) Determining that all exchanged files on the APR are reflected on the TPDX by matching data file names on the APR with data file names on the TPDX modules.

IV. To evaluate the Project Office's effectiveness to ensure Mass Filers have been notified of the century date standard, we:

A. Discussed with the Project Office, the process used to identify the mass filers and monitor the issuance of revenue procedures that communicate the century date standard.

B. Contacted the functions responsible for issuing the revenue procedures and determined the status of issuance.

C. Reviewed completed revenue procedures, other public documents, and bulletin board information to ensure the century date standard is included.

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

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MEMORANDUM FOR CHIEF INSPECTOR I

FROM: Helen H. Bolton
               Acting Deputy Chief Information Officer for
               Information Resources Management IS:I

SUBJECT: Internal Audit Memorandum #1 - Reported Overall Assessment
               for External Trading Partner Activities May Not Accurately Reflect
               Impact From Project Delays, May 28, 1998

We have reviewed the subject memorandum and provide the attached management
response.

If you have any questions, or need additional information, please feel free to call me on
(202) 622-0260, or have a member of your staff call Donna Downing on (202) 283-4159.

Attachment

CONCUR: _____   7/2/98
        Acting Associate Commissioner for Modernization/   Date
        Chief Information Officer IS

Internal Audit Memorandum #1 - Reported Overall Assessment for External Trading Partner Activities May Not Accurately Reflect Impact From Project Delays

The Century Date Change Project Office essentially agrees with the facts as stated, but wishes to comment on a few of Internal Audit's perceptions. The Project Office acknowledges having encountered delays in matching the data file inventory with data exchanges and in completing of "certifications" with External Trading Partners (ETPs). However, these delays do not translate into delays in the conversion progress. Much of our certification activity has been planned from the start to be an "after the fact" or post-conversion activity. Although certification progress has been slow, code maintenance organizations have proceeded on schedule with their Year 2000 (Y2K) conversion activities, and have returned 163 converted files to production for all phases. The "green" status for conversion progress has been changed to "yellow". The Project Office could consider adding a column or retitling an existing column to reflect the certification status.

Internal Audit has expressed well the role of the Executive Steering Committee (ESC), and the Project Office is in complete agreement that risks and delays must be properly identified. With that in mind, the Project Office developed a handout for use in the June 12, 1998, ESC. The handout shows the responses received from organizations from which the Project Office requested information to complete the matching of files and data exchanges, specifically identifying files exchanged externally for orphan data exchanges. The handout includes a color status, which reflects the progress that organizations accountable for the work have made.

Although matching of data files to data exchanges was scheduled to be completed by March 31, 1998 the number unmatched was down to sixteen by April 20, 1998 only three weeks later. That represented 5% of the 312 files identified. By the Project Office's standards, 5% is the cutoff point for green/yellow. INOMS was designed as an on-line system. With an on-line system, one for which all developers are authorized to add or delete files, it's realistic to expect some fluctuation in the numbers of unresolved files at any given time. The minor three weeks delay and the low number of unresolved files do not necessarily warrant a lowering of the overall status to yellow. However, the Project Office reports the status of the tracking mechanism as "yellow" to reflect this delay.

Internal Audit commented that the Project Office is concerned about the small number of files reported by IRS Field & Customer organizations. The Project Office has taken the following steps with respect to that concern:

1.) The Director, Century Date Change Project Office, used the Monday morning progress meetings on two consecutive weeks to express that concern to Field & Customer executives and ask their support in identifying additional files.
2.) The issue was identified and tracked as an "Open Action Item" at the Executive Steering Committee.
3.) The Project Office instructed Field & Customer code maintenance organizations that they could add files to the Application Program Registry (APR) for which no IRS

component was going through the 14-step process. The instruction referenced above will aid organizations who extract data via Standard Query Language (SQL) queries, or use a Computer Off-the-Shelf Software (COTS) product to produce files for external exchange.

Internal Audit stated that any delay in matching files to data exchanges will have an impact on communicating the Y2K date format standard. Knowing that the certification process would be after the fact, the Project Office asked code maintenance organizations to make technical contact with ETPs to coordinate the format and arrange to exchange test data. The Project Office also communicated the date standard via business channels by publishing it in the December 1, 1997 Internal Revenue Bulletin. A Y2k page was added to the IRS Internet Web Site on February 4, 1998, which explicitly set forth the date standard for external exchanges. The National Director of Governmental Liaison and Disclosure (CP:EX:GLD) included the Y2K date format standard in her "Communications Package" distributed to all offices on January 23, 1998. The package asked IRS executives to inform the trading partners for whom they have responsibility of our date standard.

The Project Office shares Internal Audit's concern about the orphan data exchanges, and the delays in starting the certification program. The Director, Century Date Change Project Office, developed the dashboard and color statuses as a means to provide at-a-glance information about key Century Date Change activities, and reserves the right to make determinations about the status of each activity in the project. Nevertheless, he did evaluate the situation prior to the June 11, 1998 Executive Steering Committee meeting, and downgraded the overall status of the ETP initiative.

Finally, the Century Date Change Project Office could use Internal Audit's help in identifying specific files and in identifying organizations who have failed to comply. Such identifications help us in two ways:

1. They will encourage all organizations to report their ETP information.
2. They will help identify flaws in the Project Office's instructions or processes.

The response to the specific recommendation is as follows:

**Response to Internal Audit Memorandum
Reported Overall Assessment for External Trading Partner Activities May Not
Accurately Reflect Impact From Project Delays**

Recommendation

The Century Date Change (CDC) Project Office needs to revise the overall assessment and conversion progress categories to a yellow status to more accurately reflect encountered delays.

Assessment of Cause

The CDC Project Office has encountered delays in matching the data file inventory with data exchanges and in completing of certifications with External Trading Partners (ETPs). Internal Audit believes that the delays warrant a reduction in ETP conversion status from green to yellow. These delays do not translate into delays in the conversion progress.

Corrective Action for Recommendation

The Century Date Change Project Office will revise the overall assessment and conversion progress categories to a yellow status.

Implementation Date

Completed: June 11, 1998   Proposed:

Responsible Official:

Acting Associate Commissioner for Modernization/Chief Information Officer IS
Acting Assistant Deputy Chief Information Officer for Systems Development IS:S

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

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MEMORANDUM FOR CHIEF INSPECTOR I

FROM: Helen H. Bolton
               Acting Deputy Chief Information Officer for
               Information Resources Management IS:I

SUBJECT: Internal Audit Memorandum #2 for the Audit of External Trading
               Partners - Status of Inventory of External Trading Partners,
               June 10, 1998

We have reviewed the subject memorandum and provide the attached management
response.

If you have any questions, or need additional information, please feel free to call me on
(202) 622-0260, or have a member of your staff call Donna Downing on (202) 283-4159.

Attachment

CONCUR: _____   __7/2/98__
        Acting Associate Commissioner for Modernization/   Date
        Chief Information Officer IS

**Internal Audit Memorandum #2 for the Audit of External Trading Partners - Status
of Inventory of External Trading Partners, June 10, 1998**

Although Internal Audit (IA) is not making any specific recommendations at this time, the
Century Date Change Project Office appreciates receiving the "preliminary observations"
and offers the following comments.

The Project Office agrees that additional measures may be necessary to ensure a
complete and accurate inventory. The Project Office regrets that Y2k coordinators were
confused over their responsibilities *"vis-a-vis"* the September 11, 1997, memo requesting
the identification of External Trading Partners (ETPs). However, the CDC Project Office
did expect to have to resolve orphans as a backup to ensure quality in the process. IA
states that four files are exchanged, but not included on the Application Program
Registry (APR). Unless IA communicates what those files are, the Project Office cannot
take steps to ensure that they are on the APR now. In fact, the CDC Project Office
encourages IA to take a proactive role in this process by auditing the APR and informing
the staff of inaccuracies.

Since March, 1998, the Project Office has led a "clean-up" effort of ETP files on the APR.
CDC asked maintenance owners to remove files that are not actually data exchanges,
e.g., they are sent to another IRS office or system, or to a vendor performing a service
for IRS under contract, such as printing or distributing mail labels. Others which were
known to be deleted were identified as duplicate files or files linked to duplicate
components. If IA would please provide a list of the "36 externally traded files" that were
deleted, the Project Office will go to the maintenance organizations and find out why they
are deleting such files. There are 68 orphan data exchanges on INOMS, all but a few of
those are data exchanges identified by business owners for which no files have ever
been identified, not the results of the untraceable deleting of files.

Under "Accuracy of Data Exchanges" IA notes that there may be little or no
communication between the business owners and maintenance organizations.
Recognizing this problem, the Project Office and their partners in the Governmental
Liaison and Disclosure Office (CP:EX:GLD) approached the problem with both the
business and maintenance owners. Matching the responses from the two sides is the
best approach to ensure a comprehensive inventory and to ensure its accuracy.
Mapping files to data exchanges and resolving orphans has been frustrating at times and
is taking longer than the Project Office expected. However, the mapping provides a
systemic cross-check to the task. Much of the Project Office's work in managing
communications with External Trading Partners has never been done before. While there
were no standards for naming data exchanges, thanks to the significant effort of Carman
Gannotti of CP:EX:GLD, there are now.

The Project Office eagerly await reports of specific file and data exchange omissions, errors, or mismatches from Internal Audit as a further quality control on the process.

ATTACHMENT IV

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

RECEIVED

SEP 1 6 1998

CHIEF INFORMATION OFFICER

Chief Inspector

MEMORANDUM FOR CHIEF INSPECTOR

FROM: Toni L. Zimmerman
               Deputy Chief Information Officer for
               Information Resources Management IS:I

SUBJECT: Internal Audit Memorandum #3 - for the Audit of External
               Trading Partners - Status of Inventory of "Mass Contact" Data
               Exchanges, dated July 15, 1998

The Deputy Chief Information Officer for Systems Development and the National
Director, Governmental Liaison and Disclosure have reviewed the subject
memorandum. I have attached the management response to include the assessment
of cause, corrective action and implementation dates, as required, for each
recommendation.

If you have any questions, or need additional information, please feel free to call me at
(202) 622-0260, or have a member of your staff call Donna Downing on
(202) 283-4159.

Attachment

CONCUR: _____   9/15/98
        Chief Information Officer IS   Date

Page 1

**Internal Audit Memorandum #3- for the Audit of External Trading Partners —
Status of Inventory of "Mass Contact" Data Exchanges dated July 15, 1998**

Internal Audit Recommendation 1

Not all mass contact data exchanges have been identified. This conclusion was
reached based on the fact that the Century Date Change Project Office (Project Office)
had identified and requested certification on only 12 of 31 (39%) mass contact data
exchanges.

Assessment of Causes

Internal Audit (IA) suggests that the remaining 19 files may have been omitted as a
result of the process used to identify mass contact data exchanges. IA also expresses
concern with the naming process. For example, the Phase 2 Certification only included
Forms 1099 in general, and excluded the related Forms 1098, 5498, and W-2G, which
were also included in the same file specification.

This finding appears to be based on the June 9, 1998 memorandum issued by the
Project Office regarding Year 2000 Certification with External Trading Partners, Phase
2. In reviewing the memo, it is easy to reach the conclusion noted in the Internal Audit
finding. However, Internal Audit does not provide a complete summary of the facts.
The research conducted by the Project Office prior to issuance of the Phase 2
Certification memo indicated that in several instances that the file specifications and
posting dates for multiple mass contact data exchanges were or will be published in the
same IRS document. In the cases mentioned above, the Project Office only asked the
business owners of electronic or magnetic data exchanges with external trading
partners to certify the published document one time as opposed to listing each
individual exchange. In actuality, 17 of the 19 data exchanges identified by Internal
Audit have been accounted for and the document with file specification were
documented by the Project Office.

Corrective Action

The Project Office is going to produce a revised Phase 2 Certification Listing that will list
each mass contact data exchange, annotating them, as needed, to provide a clearer
description of what they include. The Century Date Change weekly progress reports
will also include clarifying annotations. This should eliminate any confusion to any users
and/or reviewers of this process in the future.

The Project Office is aware of the importance of the certification process, and its efforts
to assure that the mass contacts of ETPs have been informed of the CDC date
standard and their readiness to accept or provide externally traded files using the date

**Internal Audit Memorandum #3- for the Audit of External Trading Partners —
Status of Inventory of "Mass Contact" Data Exchanges dated July 15, 1998**

standard. Per previous discussions, we continue to solicit any suggestions or validation
processes that IA can conduct or recommend to ensure that the ETP inventory is
complete and accurate.

Implementation Date

Completed_____   Proposed: October 1, 1998

Responsible Official

Chief Information Officer IS
Deputy Chief Information Officer for Systems Development IS:S
Program Director, Year 2000/Filing Season IS:S:CD

Internal Audit Recommendation 2

Revise naming procedures and rename mass data files to match the groupings
indicated in the file specifications.

Assessment of Causes

Internal Audit stated that:

1.   The "data files included in the Phase II certification process are inconsistently
named."

2.   Some "data files may have been omitted as a result of the process used to
identify the mass contact data files."

Corrective Action

The Office of Governmental Liaison and Disclosure has issued a supplemental Phase 2
memo in which they listed each of the Data Exchanges individually instead of
generically. The memorandum also asks the Chief Operations Officer and the Chief
Information Officer to contact the Office of Governmental Liaison and Disclosure if they
identify any additional data exchanges.

Internal Audit Memorandum #3- for the Audit of External Trading Partners —
Status of Inventory of "Mass Contact" Data Exchanges dated July 15, 1998

Implementation Date

Completed August 5, 1998

Responsible Official

Chief Information Officer IS
Deputy Chief Information Officer for Systems Development IS:S
Program Director, Year 2000/Filing Season IS:S:CD

ATTACHMENT V

RECEIVED

OCT 1 1998

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

OCT 1 1998

MEMORANDUM FOR CHIEF INSPECTOR

FROM: Toni L. Zimmerman
               Deputy Chief Information Officer for Operations IS:I

SUBJECT: Internal Audit Memorandum #4 for the Audit of External
               Trading Partners - Status of the Conversion of Phase 2
               and 3 Components Linked to External Data Exchange Files,
               dated August 25, 1998

The Deputy Chief Information Officer for Systems in the Information Systems (IS)
organization is in agreement with the subject Internal Audit (IA) memorandum.
However, we are providing the following clarification for the first bullet on page three
which states, "Year 2000 standards are being revised and may deviate from the
standards we (IA) used to analyze source code for compliance."

The Century Date Change (CDC) Project Office did not modify the CDC Date
Standards, but rather issued an interpretation of those standards. The interpretation
addressed the issues that date fields in transmittal numbers and data sets names are
not subject to the CDC Date Standards and did not have to be modified. On the issue
of validity checks for date fields, the CDC Project Office examined the existing policy
and found that the validity checks that were put in place serve to enforce the CDC Date
Standards and should not be interpreted as replacing them.

The CDC Project Office has reiterated its position on internal date routines and on
obsolete and commented code. All IS organizations must expand dates to contain four
digit years in all cases, which includes internal dates and all obsolete or commented
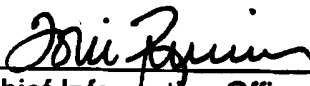code.

In addition, Northrop Grumman Technical Services, Inc., has been contracted to
perform a 100 percent review of all phase components. The CDC Project Office agrees
that to continue your audit of code along with the Northrop Grumman 100 percent code
review, would result in a duplication of efforts.

-2-

MEMORANDUM FOR CHIEF INSPECTOR

If you have any questions, please feel free to call me on (202) 622-0260, or have a member of your staff call Donna Downing on (202) 283-4159.

Concurrence: _____   10/1/98
            for Chief Information Officer IS   Date

ATTACHMENT VI

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

OCT 2 3 1998

MEMORANDUM FOR CHIEF INSPECTOR

FROM: Helen H. Bolton
              Director, Office of Information Resources Management IS:IR

SUBJECT: Draft Internal Audit Report - Evaluation of the Service's
              Efforts to Implement Year 2000 Compliance for External
              Trading Partners, dated September 30, 1998

Information Systems concurs with the subject Draft Internal Audit Report as modified
by the changes listed in the attached October 14, 1998, cc:Mail message from
Van Warmke, Internal Audit.

If you have any questions, please call me on (202) 283-4060 or have a member of your
staff call Donna Downing on (202) 283-4159.

Attachment

cc: Regional Inspector - SER
    Lynn Wofchuck, Internal Audit Manager - SER
    Assistant Chief Inspector (Internal Audit)
    Deputy Director, Office of Audit Projects